

Total Air Temperature Sensors (TAT)

Accuracy at Altitude

Convention
challenging
Ground breaking
Inventive thinking

At Auxitrol Weston we are **driven by our Customers' technology road - mapping**. So, it will come as no surprise to learn that our TAT sensor research and development programme is not only looking to answer current customer requirements, even recent changes in FAA legislation, but to **anticipate the technologies of the future**.

Consequently, our latest TAT sensors incorporate two defining characteristics – our patented, cutting edge Platinum RTD, with its rather **clever monocoq ceramic element mandrel** and a **unique aerodynamic and thermodynamic monocoq body**. This sensor effectively removes the need for any form of electric heating.

General Features

- Temperature range from -78°C to +150°C
- Exceed latest EASA and FAA Regulations
- Customised interface (1x100; 2x100; 1x200; 2x200; 1x500; 2x500 Ohms)
- Unique ceramic monocoq element mandrel design
- Extremely low sensitivity to ice crystal and icing conditions
- Our sensors outperform our competitors in independently audited testing

Icing Wind Tunnel and "All Ice®".

In our Atmospheric Laboratory at Bourges, France we are constantly perfecting methods of de-icing, utilising our **exclusive cloud simulation equipment**, which allow us to recreate operational conditions ranging from **controlled icing** through water droplet spray to **ice crystal bombardment** of concentrations ranging from 0.2 to 8g/m³ and up to 1mm in particle size, at various speeds and temperatures. Accuracy on these sensors can reach +/-0.3°C

Here, our revolutionary alloy was also developed, a revolutionary alloy with extraordinary mechanical and thermal characteristics. Already proving to be of particular advantage for applications in environments where heating has historically been required, it is now **challenging conventional thinking** on ice accretion.

And, in line with Auxitrol Weston' Corporate Social Responsibility policy, Contains no toxic Be compounds, which is a contributing factor in keeping us ahead of our REACH targets.

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Total Air Temperature Sensors (TAT)

A Pioneering and Progressive culture

Research & Development

In a world where Pedigree, is considered more important than invention, it would be too easy to perpetuate Industry norms, by settling for incremental change. But, we work in a world that is rapidly changing, where we, like many of our Customers, are looking beyond the horizon, **exploring areas where Sensors and engineering technologies are yet to go.**

To extend the value of our ongoing generic **Research & Development** works, across our core product areas of Speed, Torque, Tip Clearance, Mass Flow, Temperature and Pressure, we have built a strong group of collaborative partners who work with us to maintain our market leading position.

While others tend to operate within NASA defined Technology Readiness Levels (TRLs) 6 - 9, at Auxitrol Weston we routinely work between TRLs 2 – 9, resulting in **ground breaking products with worldwide patents.**

We are currently engaged in a series of **initiatives across Europe and the USA**, working with leading Academic Institutions, Industry Laboratories, the French National Centre for Scientific Research, numerous Strategic OEM Partners and Government bodies.

Among these, is the CDSHP programme, a major Public and Private sector collaboration, tackling ice accretion in Aviation, including the hazards associated with the Ice Crystal phenomenon. Together, **we're pushing the boundaries of existing Sensor understanding**, to bring new products to market with Industry leading standards of performance.

It's an inspiring process, designed to thrill our own people as much as our Customers. And, it's further evidence of our commitment to **maintaining our Customers reputations**, our world leading position and our promise of unswerving reliability.

The Last Word in Absolute Reliability

We want our Customers to have access to only the most advanced Sensors in the world. We've resourced accordingly.

The finest Engineering intellect. Extraordinary resources. Encouraged passion. When you have all of these, there isn't a test or a sensor challenge the world can throw at us, we can't deliver upon.

The relationships between our Research and Development Unit, our many Test Laboratories, our Design and Simulation teams, go beyond connected. These are **truly integrated resources** which enable our Engineers to test as much as they feel is appropriate. To question their test findings. To simulate product characteristics and go on questioning, testing, analysing, refining and improving until they are completely satisfied.

And, because great ideas and product improvements are borne "of the moment", we've made sure we can **respond immediately** to bring them to life, so that you can **rely upon them - absolutely!**

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